



Test Report

No.: ATZ2017154

Date: Jun. 13, 2017

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Applicant :

Address :

The following sample(s) was/were submitted and identified on behalf of the client as:

Product Name : Power bank

Model : LP-1005A, LP-605A, LP-2005A, LP-1005B, LP-525A, LP-1025A, LP-2025A,
LP-507A PLUS, LP-707A PLUS, LP-1007A PLUS, LP-1030A, LP-510A,
LP-1010A, LP-1008B, LP-613B, LP-1013B, LP-2013B

Manufacturer :

Address :

Date of Sample Received : Jun. 06, 2017

Test period : Jun. 06, 2017 - Jun. 13, 2017

Test requested

In accordance with RoHS Directive 2011/65/EU, to determine Cadmium (Cd), Lead (Pb), Mercury (Hg), Chromium (Cr⁶⁺), PBBs/PBDEs, content on submitted samples.

Conclusion

Pass

Test method : Please refer to next page.

Test result : Please refer to next page.

Date of Report:

Jun. 13, 2017

Prepared by :



Approve & Authorized Signer :

(Sean Liu, Manager)

Accurate Technology Co., Ltd.

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Test method:

Testing Item		Test Method	Measuring Instrument	MDL
Screening test		IEC 62321-3-1: 2013 scanning	XRF	5mg/kg
Chemical test	Lead (Pb)	IEC 62321-5: 2013	ICP-OES	2mg/kg
	Cadmium (Cd)	IEC 62321-5: 2013	ICP-OES	2mg/kg
	Mercury (Hg)	IEC 62321-4: 2013	ICP-OES	2mg/kg
	Chromium (Cr ⁶⁺)	IEC 62321: 2008 Annex C	UV-Vis	2mg/kg
		IEC 62321-7-1: 2015		---
	PBBs/PBDEs	IEC 62321-6: 2015	GC-MS	5mg/kg

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Details of test results(Unit: mg/kg):

Part No.	Test Part Name	Restricted Substances	Results of EDXRF	Result of Chemical Testing	Conclusion on RoHS
1	White plastic shell	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
2	Key black film of shell	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
3	Double-sided adhesive of shell	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
4	Silvery screw of PCB	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
5	Red PCB	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	IN	N.D.	Comply
		PBDEs		N.D.	Comply
6	Soldering tin of red PCB	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply

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Part No.	Test Part Name	Restricted Substances	Results of EDXRF	Result of Chemical Testing	Conclusion on RoHS
7	Silvery metal of J1 jack	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
8	Black plastic of J1 jack	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
9	Pin of J1 jack	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
10	Silvery metal of J1 jack	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
11	Black plastic of J1 jack	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
12	Pin of J1 jack	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply

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Part No.	Test Part Name	Restricted Substances	Results of EDXRF	Result of Chemical Testing	Conclusion on RoHS
13	SMD capacitor of PCB	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
14	Copper wire of SMD inductance of PCB	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
15	Magnet ring of SMD inductance of PCB	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
16	Body of IC of PCB	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
17	Pin of IC of PCB	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
18	SMD resistor of PCB	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply

Part No.	Test Part Name	Restricted Substances	Results of EDXRF	Result of Chemical Testing	Conclusion on RoHS
19	SMD audion of PCB	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	IN	N.D.	Comply
		PBDEs		N.D.	Comply
20	Copper-colored metal key of touch switch	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
21	Silvery metal frame of touch switch	Cr ⁶⁺	IN	Negative	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
22	Shrapnel of touch switch	Cr ⁶⁺	IN	Negative	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
23	Black plastic base of touch switch	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
24	Pin of touch switch	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply

Part No.	Test Part Name	Restricted Substances	Results of EDXRF	Result of Chemical Testing	Conclusion on RoHS
25	Black EVA mat of PCB	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
26	SMD luminous diode of PCB	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
27	White adhesive paper of battery	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
28	Brown adhesive paper of battery	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
29	Black viscose film of battery	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
30	White stripe adhesive tape of battery	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply

Part No.	Test Part Name	Restricted Substances	Results of EDXRF	Result of Chemical Testing	Conclusion on RoHS
31	Body of battery	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
32	Nickel sheet of battery	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
33	Soldering tin of battery	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
34	Red plastic jacket of battery	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
35	Silvery wire core of battery	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply
36	Black plastic jacket of battery	Cr ⁶⁺	BL	/	Comply
		Cd	BL	/	Comply
		Pb	BL	/	Comply
		Hg	BL	/	Comply
		PBBs	BL	/	Comply
		PBDEs		/	Comply

Note:

- (1) (a) It is the result on total Br while test PBBs/PBDEs by XRF, It is the result on total Cr while test Cr^{6+} by XRF;
(b) Results are obtained by XRF for primary screening and further chemical testing by ICP-OES (for Pb, Cd and Hg), UV-Vis (for Cr^{6+}) and GC-MS (for PBBs, PBDEs) is recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321-2013 (unit: mg/kg);

Element	Polymer	Metal	Composite Materials
Cd	$\text{BL} \leq (70 - 3\sigma) < X < (130 + 3\sigma) \leq \text{OL}$	$\text{BL} \leq (70 - 3\sigma) < X < (70 + 3\sigma) \leq \text{OL}$	$\text{LOD} < X < (150 + 3\sigma) \leq \text{OL}$
Pb	$\text{BL} \leq (700 - 3\sigma) < X < (1300 + 3\sigma) \leq \text{OL}$	$\text{BL} \leq (700 - 3\sigma) < X < (1300 + 3\sigma) \leq \text{OL}$	$\text{BL} \leq (500 - 3\sigma) < X < (1500 + 3\sigma) \leq \text{OL}$
Hg	$\text{BL} \leq (700 - 3\sigma) < X < (1300 + 3\sigma) \leq \text{OL}$	$\text{BL} \leq (700 - 3\sigma) < X < (1300 + 3\sigma) \leq \text{OL}$	$\text{BL} \leq (500 - 3\sigma) < X < (1500 + 3\sigma) \leq \text{OL}$
Cr	$\text{BL} \leq (700 - 3\sigma) < X$	$\text{BL} \leq (700 - 3\sigma) < X$	$\text{BL} \leq (500 - 3\sigma) < X$
Br	$\text{BL} \leq (300 - 3\sigma) < X$	---	$\text{BL} \leq (250 - 3\sigma) < X$

- (c) OL=Over Limit, BL=Below Limit, IN=Inconclusive, LOD= Limit of Detection;
(d) The XRF screening test for RoHS elements –The reading may be different to the actual content in the sample be of non-uniformity composition.

- (2) (a) mg/kg=ppm=0.0001%, N.D.=Not detected(<MDL), MDL=Method Detection Limit, “---”=Not conducted, “/”=Not available.

- (b) According to IEC 62321-7-1: 2015, result on Cr^{6+} for metal coating sample is shown as Positive/Negative. Negative= Absence of Cr^{6+} coating, Positive= Presence of Cr^{6+} coating

(3) RoHS Requirement

Restricted substances	Limits
Lead (Pb)	0.1% (1000 ppm)
Cadmium (Cd)	0.01% (100 ppm)
Chromium(VI) (Cr^{6+})	0.1% (1000 ppm)
Mercury (Hg)	0.1% (1000 ppm)
Polybrominated biphenyls (PBBs)	0.1% (1000 ppm)
Polybrominated diphenyl ethers (PBDEs)	0.1% (1000 ppm)

The above limits are reference with 2011/65/EU.

- (4) Specimens, which requested to determine Cadmium, Mercury and Lead Content, have been dissolved completely.

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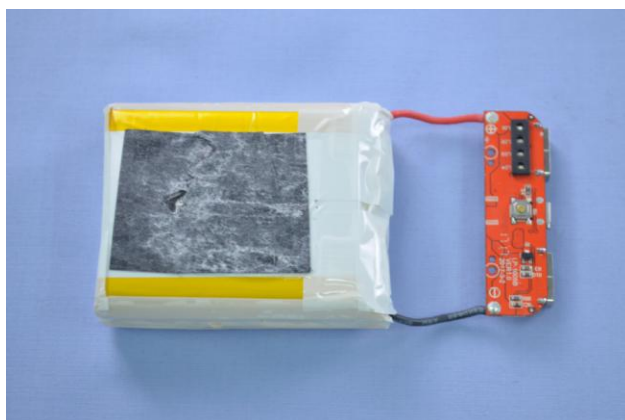
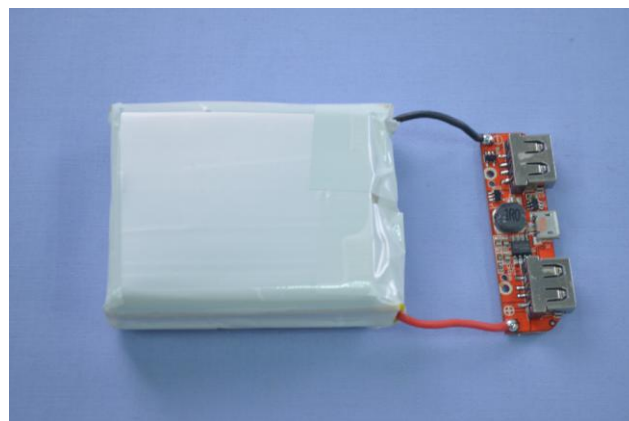
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Photographs of Sample:

End of Report